



DEPARTMENT OF THE AIR FORCE
59TH MEDICAL WING (AETC)
JOINT BASE SAN ANTONIO - LACKLAND TEXAS



23 JUNE 2017

MEMORANDUM FOR ST

ATTN: DEBRA E NIEMEYER

FROM: 59 MDW/SGVU

SUBJECT: Professional Presentation Approval

1. Your paper, entitled **59 MDW/ST Overview Briefing 15 June 2017** presented at/published to **General Distribution; Available for Visitors, Email Distribution, Etc.** in accordance with MDWI 41-108, has been approved and assigned local file #**17265**.
2. Pertinent biographic information (name of author(s) title, etc.) has been entered into our computer file. Please advise us (by phone or mail) that your presentation was given. At that time, we will need the date (month, day and year) along with the location of your presentation. It is important to update this information so that we can provide quality support for you, your department, and the Medical Center commander. This information is used to document the scholarly activities of our professional staff and students, which is an essential component of Wilford Hall Ambulatory Surgical Center (WHASC) internship and residency programs.
3. Please know that if you are a Graduate Health Sciences Education student and your department has told you they cannot fund your publication, the 59th Clinical Research Division may pay for your basic journal publishing charges (to include costs for tables and black and white photos). We cannot pay for reprints. If you are a 59 MDW staff member, we can forward your request for funds to the designated Wing POC at the Chief Scientist's Office, Ms. Alice Houy, office phone: 210-292-8029; email address: alice.houy.civ@mail.mil.
4. Congratulations, and thank you for your efforts and time. Your contributions are vital to the medical mission. We look forward to assisting you in your future publication/presentation efforts.

LINDA STEEL-GOODWIN, Col, USAF, BSC
Director, Clinical Investigations & Research Support

PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS

INSTRUCTIONS

USE ONLY THE MOST CURRENT 59 MDW FORM 3039 LOCATED ON AF E-PUBLISHING

1. The author must complete page two of this form:
 - a. In Section 2, add the funding source for your study [e.g., 59 MDW CRD Graduate Health Sciences Education (GHSE) (SG5 O&M); SG5 R&D; Tri-Service Nursing Research Program (TSNRP); Defense Medical Research & Development Program (DMRDP); NIH; Congressionally Directed Medical Research Program (CDMRP) ; Grants; etc.]
 - b. In Section 2, there may be funding available for journal costs, if your department is not paying for figures, tables or photographs for your publication. Please state "YES" or "NO" in Section 2 of the form, if you need publication funding support.
2. Print your name, rank/grade, sign and date the form in the author's signature block or use an electronic signature.
3. Attach a copy of the 59 MDW IRB or IACUC approval letter for the research related study. If this is a technical publication/presentation, state the type (e.g. case report, QA/QI study, program evaluation study, informational report/briefing, etc.) in the "Protocol Title" box.
4. Attach a copy of your abstract, paper, poster and other supporting documentation.
5. Save and forward, via email, the processing form and all supporting documentation to your unit commander, program director or immediate supervisor for review/approval.
6. On page 2, have either your unit commander, program director or immediate supervisor:
 - a. Print their name, rank/grade, title; sign and date the form in the approving authority's signature block or use an electronic signature.
7. Submit your completed form and all supporting documentation to the CRD for processing (59crdpubspres@us.af.mil). **This should be accomplished no later than 30 days before final clearance is required to publish/present your materials.** If you have any questions or concerns, please contact the 59 CRD/Publications and Presentations Section at 292-7141 for assistance.
8. The 59 CRD/Publications and Presentations Section will route the request form to clinical investigations, 502 ISG/JAC (Ethics Review) and Public Affairs (59 MDW/PA) for review and then forward you a final letter of approval or disapproval.
9. Once your manuscript, poster or presentation has been approved for a one-time public release, you may proceed with your publication or presentation submission activities, as stated on this form. **Note:** For each new release of medical research or technical information as a publication/presentation, a new 59 MDW Form 3039 must be submitted for review and approval.
10. If your manuscript is accepted for scientific publication, please contact the 59 CRD/Publications and Presentations Section at 292-7141. This information is reported to the 59 MDW/CC. All medical research or technical information publications/presentations must be reported to the Defense Technical Information Center (DITC). See 59 MDWI 41-108, *Presentation and Publication of Medical and Technical Papers*, for additional information.
11. The Joint Ethics Regulation (JER) DoD 5500.07-R, *Standards of Conduct*, provides standards of ethical conduct for all DoD personnel and their interactions with other non-DoD entities, organizations, societies, conferences, etc. Part of the Form 3039 review and approval process includes a legal ethics review to address any potential conflicts related to DoD personnel participating in non-DoD sponsored conferences, professional meetings, publication/presentation disclosures to domestic and foreign audiences, DoD personnel accepting non-DoD contributions, awards, honoraria, gifts, etc. The specific circumstances for your presentation will determine whether a legal review is necessary. **If you (as the author) or your supervisor check "NO" in block 17 of the Form 3039, your research or technical documents will not be forwarded to the 502 ISG/JAC legal office for an ethics review.** To assist you in making this decision about whether to request a legal review, the following examples are provided as a guideline:

For presentations before professional societies and like organizations, the 59 MDW Public Affairs Office (PAO) will provide the needed review to ensure proper disclaimers are included and the subject matter of the presentation does not create any cause for DoD concern.

If the sponsor of a conference or meeting is a DoD entity, an ethics review of your presentation is not required, since the DoD entity is responsible to obtain all approvals for the event.

If the sponsor of a conference or meeting is a non-DoD commercial entity or an entity seeking to do business with the government, then your presentation should have an ethics review.

If your travel is being paid for (in whole or in part) by a non-Federal entity (someone other than the government), a legal ethics review is needed. These requests for legal review should come through the 59 MDW Gifts and Grants Office to 502 ISG/JAC.

If you are receiving an honorarium or payment for speaking, a legal ethics review is required.

If you (as the author) or your supervisor check "YES" in block 17 of the Form 3039, your research or technical documents will be forwarded simultaneously to the 502 ISG/JAC legal office and PAO for review to help reduce turn-around time. If you have any questions regarding legal reviews, please contact the legal office at (210) 671-5795/3365, DSN 473.

NOTE: All abstracts, papers, posters, etc., should contain the following disclaimer statement:

"The views expressed are those of the [author(s)] [presenter(s)] and do not reflect the official views or policy of the Department of Defense or its Components"

NOTE: All abstracts, papers, posters, etc., should contain the following disclaimer statement for research involving humans:

"The voluntary, fully informed consent of the subjects used in this research was obtained as required by 32 CFR 219 and DODI 3216.02_AFI 40-402."

NOTE: All abstracts, papers, posters, etc., should contain the following disclaimer statement for research involving animals, as required by AFMAN

40-401_IP :

"The experiments reported herein were conducted according to the principles set forth in the National Institute of Health Publication No. 80-23, Guide for the Care and Use of Laboratory Animals and the Animal Welfare Act of 1966, as amended."

PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS			
1. TO: CLINICAL RESEARCH	2. FROM: (Author's Name, Rank, Grade, Office Symbol) Niemeyer, Debra M., GS15; 59 MDW/ST	3. GME/GHSE STUDENT: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	4. PROTOCOL NUMBER: NA
5. PROTOCOL TITLE: (NOTE: For each new release of medical research or technical information as a publication/presentation, a new 59 MDW Form 3039 must be submitted for review and approval.) NA			
6. TITLE OF MATERIAL TO BE PUBLISHED OR PRESENTED: 59 MDW/ST OVERVIEW BRIEFING 15 JUNE 2017			
7. FUNDING RECEIVED FOR THIS STUDY? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO FUNDING SOURCE:			
8. DO YOU NEED FUNDING SUPPORT FOR PUBLICATION PURPOSES: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
9. IS THIS MATERIAL CLASSIFIED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
10. IS THIS MATERIAL SUBJECT TO ANY LEGAL RESTRICTIONS FOR PUBLICATION OR PRESENTATION THROUGH A COLLABORATIVE RESEARCH AND DEVELOPMENT AGREEMENT (CRADA), MATERIAL TRANSFER AGREEMENT (MTA), INTELLECTUAL PROPERTY RIGHTS AGREEMENT ETC.? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO NOTE: If the answer is YES then attach a copy of the Agreement to the Publications/Presentations Request Form.			
11. MATERIAL IS FOR: <input checked="" type="checkbox"/> DOMESTIC RELEASE <input type="checkbox"/> FOREIGN RELEASE CHECK APPROPRIATE BOX OR BOXES FOR APPROVAL WITH THIS REQUEST. ATTACH COPY OF MATERIAL TO BE PUBLISHED/PRESENTED.			
<input type="checkbox"/> 11a. PUBLICATION/JOURNAL (List intended publication/journal.)			
<input type="checkbox"/> 11b. PUBLISHED ABSTRACT (List intended journal.)			
<input type="checkbox"/> 11c. POSTER (To be demonstrated at meeting: name of meeting, city, state, and date of meeting.)			
<input type="checkbox"/> 11d. PLATFORM PRESENTATION (At civilian institutions: name of meeting, state, and date of meeting.)			
<input checked="" type="checkbox"/> 11e. OTHER (Describe: name of meeting, city, state, and date of meeting.) General Distribution; Available for Visitors, Email Distribution, Etc.			
12. HAVE YOUR ATTACHED RESEARCH/TECHNICAL MATERIALS BEEN PREVIOUSLY APPROVED TO BE PUBLISHED/PRESENTED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO ASSIGNED FILE # _____ DATE _____			
13. EXPECTED DATE WHEN YOU WILL NEED THE CRD TO SUBMIT YOUR CLEARED PRESENTATION/PUBLICATION TO DTIC NOTE: All publications/presentations are required to be placed in the Defense Technical Information Center (DTIC).			
DATE NA			
14. 59 MDW PRIMARY POINT OF CONTACT (Last Name, First Name, M.I., email) Lopez, Raquel L., raquel.l.lopez6.ctr@mail.mil			15. DUTY PHONE/PAGER NUMBER 210-292-3366
16. AUTHORSHIP AND CO-AUTHOR(S) List in the order they will appear in the manuscript.			
LAST NAME, FIRST NAME AND M.I.	GRADE/RANK	SQUADRON/GROUP/OFFICE SYMBOL	INSTITUTION (If not 59 MDW)
a. Primary/Corresponding Author Debra M. Niemeyer	GS15	59 MDW/ST	
b.			
c.			
d.			
e.			
17. IS A 502 ISG/JAC ETHICS REVIEW REQUIRED (JER DOD 5500.07-R)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
I CERTIFY ANY HUMAN OR ANIMAL RESEARCH RELATED STUDIES WERE APPROVED AND PERFORMED IN STRICT ACCORDANCE WITH 32 CFR 219, AFMAN 40-401_IP, AND 59 MDWI 41-108. I HAVE READ THE FINAL VERSION OF THE ATTACHED MATERIAL AND CERTIFY THAT IT IS AN ACCURATE MANUSCRIPT FOR PUBLICATION AND/OR PRESENTATION.			
18. AUTHOR'S PRINTED NAME, RANK, GRADE Raquel L. Lopez, CTR, 59 MDW/ST		19. AUTHOR'S SIGNATURE LOPEZ RAQUEL LYNN 1390331670	20. DATE June 19, 2017
21. APPROVING AUTHORITY'S PRINTED NAME, RANK, TITLE Brenda J. Morgan, Col, Director Nursing Research Division		22. APPROVING AUTHORITY'S SIGNATURE MORGAN BRENDA J. 1135106085	23. DATE June 19, 2017

PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS

1st ENDORSEMENT (59 MDW/SGVU Use Only)

TO: Clinical Research Division 59 MDW/CRD Contact 292-7141 for email instructions.		24. DATE RECEIVED June 19, 2017	25. ASSIGNED PROCESSING REQUEST FILE NUMBER 17265
26. DATE REVIEWED 20 Jun 2017		27. DATE FORWARDED TO 502 ISG/JAC	
28. AUTHOR CONTACTED FOR RECOMMENDED OR NECESSARY CHANGES: <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES If yes, give date. 20 Jun 2017 <input type="checkbox"/> N/A			
29. COMMENTS <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED The presentation was relocated. The presentation is approved.			
30. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER Rocky Calcote, PhD, Clinical Research Administrator		31. REVIEWER SIGNATURE CALCOTE ROCKY.D.1178245844 <small>Digitally signed by CALCOTE ROCKY.D.1178245844 DN: cn=Rocky.D. Calcote, o=59 MDW, ou=59 MDW, email=rocky.d.calcote@us.army.mil, c=US Date: 2017.06.23 10:13:22 -0700</small>	32. DATE

2nd ENDORSEMENT (502 ISG/JAC Use Only)

33. DATE RECEIVED	34. DATE FORWARDED TO 59 MDW/PA
35. COMMENTS <input type="checkbox"/> APPROVED (In compliance with security and policy review directives.) <input type="checkbox"/> DISAPPROVED	
36. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER	37. REVIEWER SIGNATURE
	38. DATE

3rd ENDORSEMENT (59 MDW/PA Use Only)

39. DATE RECEIVED June 23, 2017	40. DATE FORWARDED TO 59 MDW/SGVU June 23, 2017
41. COMMENTS <input checked="" type="checkbox"/> APPROVED (In compliance with security and policy review directives.) <input type="checkbox"/> DISAPPROVED	
42. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER Kevin Inuma, SSgt/E-5, 59 MDW Public Affairs	43. REVIEWER SIGNATURE INUMA KEVIN.MITSUGU.1296227 613 <small>Digitally signed by INUMA KEVIN.MITSUGU.1296227 DN: cn=Kevin Inuma, o=59 MDW, ou=59 MDW, email=inuma.kevin@us.army.mil, c=US Date: 2017.06.23 10:45:38 -0700</small>
	44. DATE June 23, 2017

4th ENDORSEMENT (59 MDW/SGVU Use Only)

45. DATE RECEIVED	46. SENIOR AUTHOR NOTIFIED BY PHONE OF APPROVAL OR DISAPPROVAL <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> COULD NOT BE REACHED <input type="checkbox"/> LEFT MESSAGE	
47. COMMENTS <input type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED		
48. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER	49. REVIEWER SIGNATURE	50. DATE



59th Medical Wing



Research Overview



Deb Niemeyer PhD DAF
Chief Scientist
59th Medical Wing
Jun 2017

debra.m.niemeyer.civ@mail.mil



Overview



- Introduction
- Mission Alignment
- Research Portfolio
- Programs & Capabilities
- QIPS Research Support
- Summary





Alignment with Senior Leadership



- **Air Force S&T Strategic Vision**

- **Global Horizons:** Leverage revolutionary capabilities to anticipate future threats, mitigate vulnerabilities, and shape maximal advantage of impending and unexpected opportunities to assure Global Vigilance, Global Reach and Global Power across air, space, and cyberspace.
- **Autonomous Horizons:** The future for system autonomy; provides direction and guidance on the opportunities and challenges for the development of autonomous systems for operations in space, cyber, command and control, intelligence, surveillance and reconnaissance, readiness, and sustainment across the Air Force.

AF/SG Research & Acquisitions Intent: Leverage resources, emphasize requirements, optimize programs to ensure good stewardship of resources and deliberate execution, and strengthen human capital, to build and maintain a strong R&A program to optimize our ability to fly, fight and win.

- **59 MDW Mission:** Developing Warrior Medics Through Patient-Centered Care.

VISION: "Trusted Care, Anywhere"



Critical National and Local Resource

- **Strategic Asset**
 - “Home of Military Medicine”—SA Chamber of Commerce assessed \$3B direct, \$1B indirect economic impact
- **10 MTFs/\$1.18B Budget /12,000 staff/240,000 beneficiaries**
- **\$1.4B MilCons completed/pending**
- **37 GME programs w/ 592 residents—92% 1st time pass rate**
- **Contingency/Humanitarian response—4 CCATs on call 24/7 and ~150 Service Members deployed**
- **Significant Medical Innovation, Research, and Development**
- **San Antonio Military Medical Center**
 - DoD’s most productive inpatient facility
 - DoD’s only CONUS Level 1 Trauma Center
 - DoD’s only Bone Marrow Transplant Unit
 - DoD’s only Burn Center
 - Center for the Intrepid
- **Wilford Hall Ambulatory Surgical Center and Clinics**
 - DoD’s largest outpatient facility
 - DoD’s largest Blood Donor Center
- **DoD’s largest centralized appointing/referral management**



Patients First, Partners Always



ST Enables across Mission Areas, Trusted Care and HRO



- Largest of 15 clinical training sites in the USAF
- AFMS' most productive Clinical Investigation Facility & Program
 - ~400 protocols (JBSA-Lackland)
 - Readiness Training
 - Regulatory Oversight/Compliance
- AFMS's Clinical & Translational Research Platform
 - Research-QI-EBP Continuum
- Mission Aligned Research Lanes
 - AE/En Route Care
 - Trauma/Resuscitation/Stabilization
 - Diagnostics & Therapeutics
 - Modeling Simulation Training
 - Clinical Rehabilitative Medicine
 - Clinical Investigations Program
 - Dental & Nursing Research



Science & Technology



Vision: *Grow Medical Leaders, Drive Innovations in Patient Care and Readiness*

Mission: *Conduct clinical studies and translational research and apply knowledge gained to enhance performance, protect the force, and advance medical care and capabilities across the global health system*

Lead & Support Research

Advance Modernization Efforts

Foster Collaboration

Address End User Needs

Ensure Scientific Excellence

Wing, SAUSHEC, AFMS, LAF, ASD/OSD, Joint Cmts / S&T Liaison



Readiness, Healthcare, Education, Training, and Research



**Chief Scientist
Science and Technology
Providing operational capability through...**



JBSA Main Office: (210) 292-2097



Research Portfolio



Wing Research Lanes

Trauma,
Resuscitation,
Stabilization &
En Route Care

Advanced
Diagnostics &
Therapeutics

Clinical &
Rehabilitative
Medicine

Medical Modeling,
Simulation Training

Dental, Nursing, &
959MDG Research

Clinical Investigation
Program

Quality
Improvement



Lifesaving Interventions (LSI): The purpose of this study is to describe the incidence and efficacy of specific prehospital LSIs, consistent with the Tactical Combat Casualty Care paradigm, performed during the resuscitation of casualties in a combat zone.



Comprehensive Adult Extracorporeal Support Program: Extracorporeal membrane oxygenation is a technique of providing both cardiac and respiratory support oxygen to patients whose heart and lungs are severely diseased or damaged. Will develop a comprehensive capability to provide extracorporeal support to adult patients in SAMMC catchment area and for combat casualties who exceed conventional transport capabilities.



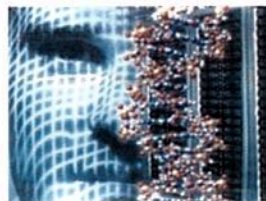
The Trauma Specific Vascular Injury Shunt (TS-VIS): Limb injury from decreased blood flow can occur with blood vessel injuries, and may result in the need for limb amputation. Restoration of limb circulation prior to irreversible injury may result in additional injury from toxic oxygen derivatives. This study examines newly designed TS-VIS and will test for insertion ease, patency in the artery, and adequacy in keeping in-line flow to injured limbs.



Fractionated CO2 Laser and Burn Scar Contractures: Evaluation of Post-Treatment Scar Function and Appearance- This study aims to improve range of motion, scar compliance, and aesthetics of erythema and pigmentation, while decreasing scar thickness and minimizing side effects and the potential complications of treatment while identifying non-surgical modalities that result in expansion of the skin and reduced tension in burn contracture scars and increased pliability of burn contracture scars.



Characterization of the Proteomic Response to Hydrocodone : A Preliminary Study to Understand Physiological Responses of Opioid Abuse, Overdose, and Pain- Use of oral fluid proteomes to understand mechanism of individual predilection for drug abuse will provide new tools to reduce substance abuse (e.g. tailor drug therapy, counseling, preventive therapies).



Genetic Epidemiology of Risk-Associated Single Nucleotide Polymorphisms (SNPs) of Type 2 Diabetes (T2D) Mellitus: This study compares genetic marker incidence between T2D patients and controls within retired military/dependent populations. It also establishes frequency of heterozygosity vs. homozygosity of SNP alleles by allelic discrimination, determines statistically significant genetic markers for T2D, and assesses individual T2D risk within the active duty population.

Performing Research and Providing Deliverables to Address AFMS Priorities across the Continuum of Care



Core Research Competencies

Representative AFMS & Joint Mission Alignment

En Route Critical Care / Joint En Route Care*

Conduct far forward research to enhance comprehensive quality of care from POI to definitive care including patient stabilization, preparation for movement, staging, in-flight/in-transit critical care, and system safety.



Competency Areas

- Life Saving Interventions
- Innovative Medical Technologies
- Emergency, Preservation, Resuscitation (EPR)
- In flight Specialty Care (Burn, ECLS)
- Training & Education

*TCCT/MERT/CCATT/TACEVAC/MEDEVAC/Burn Flight Team

Expeditionary Medicine / Combat Casualty Care

Conduct research to enhance point of injury care towards decreasing morbidity and mortality. Design, develop, demonstrate, and translate materiel and non-materiel interventions to improve patient quality of life.

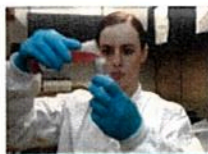


Competency Areas

- Extending the Golden Hour/EPR
- Aortic Hemostasis and Resuscitation
- Inflammation Modulation of Trauma
- Trauma, Hemostasis and Resuscitation
- Vascular Injury and Forward Damage Control Surgery
- TBI/PH and Blast Injury; Disaster Medicine

Force Health Protection / Military Ops Medicine

Protection from biological/infectious disease, radiological, noise hazards and other environmental threats, and enhancing injury prevention.

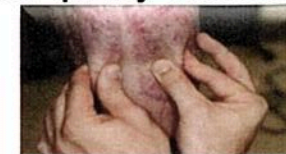


Competency Areas

- Targeted Health Risk Identification
- Health Surveillance, Infection & Immunity, Injury Prevention
- Hazard Detection & Mitigation; Psych Health/Resilience
- Directed Energy/Radiation (ID, Clinical Care/Treatment)
- Databases

Operational Medicine / Clinical & Rehab Medicine

Prevention, diagnosis and treatment of disease and rehabilitation; validate advanced treatments and technologies for the delivery of highest quality of care.



Competency Areas

- Regenerative/Restorative Medicine
- Military Health & Resiliency ("Readiness")
- Personalized Medicine ("Omics"/Bioinformatics/Repositories)
- Trauma Injury Rehabilitation, Pain Mngmt & Substance Abuse
- In-garrison Specialty Medical Care, Chronic Diseases

Advancing Innovative & Transformative Clinical Studies & Translational Research, Improving Healthcare



San Antonio Military Medical Research

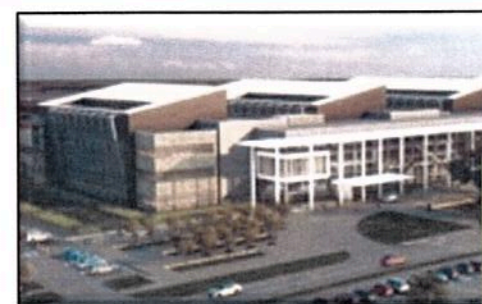
Strong DoD-Federal-Academia-Industry Synergy



San Antonio Military Medical Center



Center for the Intrepid



Wilford Hall Ambulatory Surgical Center

Real World Testbed

CAMD



Clinical Research Division



Audie L. Murphy VA Memorial Hospital



Battlefield Health & Trauma Research Institute



UT Health Science Center San Antonio



AF Post-Graduate Dental School & Clinic



**Tri-Service Research Laboratory
NAMRU/SA, 711th HPW**



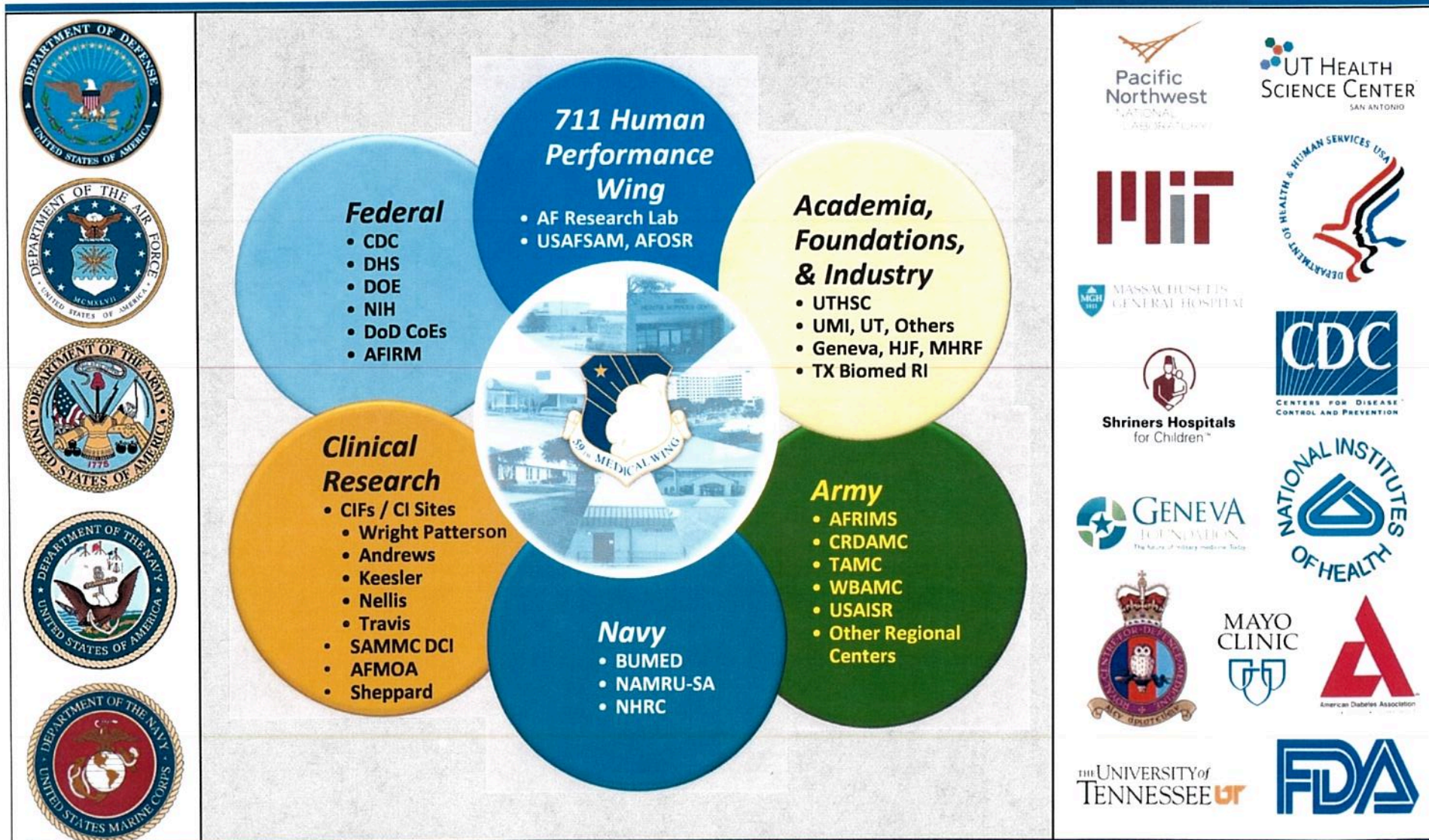
UT San Antonio

Biomed SA

"San Antonio. City of Science and Health."



Collaborations



Conducting and Supporting Research at over 80 sites Worldwide



ST QIPS Support

Lead: Deputy Chief Scientist



- **Provide Consultative Support / Assistance**
 - Dedicated Support Cell
 - Study Design and Biostatistical Analysis
 - Project Pre-planning

- **Gateway Briefings and Outreach**
 - Research vs. Non-Research Briefings
 - HPI Instruction
 - Gateway graduation attendance as Peer Reviewer



- **Clinical Investigation Program**
 - Support QI studies for GHSE scholarly activities
 - Funds available to defray Manuscript costs



Major Programs/Capabilities



- **Clinical Research Division**
 - Clinical Investigation Program, Readiness & Certification Training
- **Nursing Research Division**
 - Chief Nurses Research consultation/24 MTFs; Staff consultation
- **Dental Research and Evaluation**
 - USAF Post Graduate Dental School and Clinics, JBSA-Lackland
 - Dental Evaluation and Consultation Service, JBSA-Fort Sam Houston
- **Center for Molecular Detection**
 - Rapid Pathogen Detection/Analysis & Precision Medicine Research
- **En Route Care Research Center**
 - Co-located at USAISR; AE PoR collaboration with 711HPW
- **Trauma and Regenerative Medicine Research**
 - CRD, JBSA-Lackland; and USAISR/BHT and TSRL, JBSA Fort Sam Houston



Clinical Research Division



- The 59th Clinical Research Division (CRD) provides centralized administrative, technical, and scientific support and regulatory oversight and guidance to researchers in the development, performance and dissemination of clinical investigations.
- CRD manages the CIP, and supports Wing readiness and certification training requirements for residents, fellows, nurses, allied healthcare professionals and providers.



Nursing Research



- The 59 MDW Nursing Research Division (NRD) conducts and promotes research, and facilitates evidence translation to optimize nursing practice, patient outcomes, population health and education and training across the Wing, SAMHS, and MHS.
- Consists of 3 PhD prepared active duty Nurse Scientists
- 50% Research and 50% Non-research activity
 - 59 MDW: IRB; EBPC; CC directed taskers; FNP in FHC
 - AFMS: Research consultation to Chief Nurses (24 MTFs); Active members JPC5 and JPC1 WGs; AFMS Op Med Portfolio; AF NC BoD Distance Learning WG & Novice to Expert WG; SGE-HRP review; Consultant to staff for EBP, research, academics, surveys
- Productivity: \$5.5M research portfolio; 5 pubs; 16 presentations/posters; 10 CNE activities (59 MDW)





GDE & Dental Research



- The 59 Dental Training Squadron (DTS) is the flagship for dental education in the AFMS; Dental research in the 59 DTS is primarily conducted by residents and their teaching staff as part of the educational training process.
 - Five dental residency programs (Orthodontics, Prosthodontics, Advanced Education in General Dentistry, Periodontics, and Endodontics) require the completion of a research project as partial fulfillment of a M.Sc. Degree through USUHS or UTHSC.
 - Oral Surgery residency requires research scholarly activity.
- The USAF Dental Evaluation and Consultative Service (DECS) provides evaluations, investigations, and research to enhance the strategic goals of Better Care and Best Value in the AFMS and AF Dental Corps.



Dunn Dental Clinic



59DTS / AF Post Graduate School & Clinics



SAUSHEC - GME

37 Programs with 591 Military Residents

- Allergy/Immunology
- Anesthesiology
- Dermatology
- Diagnostic Radiology
- Musculoskeletal Radiology
- Trauma Radiology
- Emergency Medicine
- Emerg Medical Services
- EM Ultrasound
- Internal Medicine
- Cardiology
- Endocrinology
- Gastroenterology
- Hematology/Oncology
- Infectious Disease
- *Nephrology
- Pulmonary CC
- Rheumatology
- Sleep Medicine



SAUSHEC - GME (cont)

- Neurology
- Nuclear Medicine
- Obstetrics/Gynecology
- Ophthalmology
- Otolaryngology
- Pathology
- Cytopathology
- Pain Medicine
- Clinical Research
- Pediatrics
- Adolescent Medicine
- Neonatology
- General Surgery
- Surgical Critical Care
- Orthopedic Surgery
- *Psychiatry
- Transitional
- Urology

***University of Texas Health Science Center San Antonio (UTHSCSA)
Sponsored Program**



SAUSHEC - GAHE

22 Programs with 78 Residents

■ Air Force

- Clinical Health Psychology
- Clinical Psychology Intern
- Otolaryngology PA
- Clinical Pastoral Education
- General Surgery PA
- Clinical Social Work

■ AF/Army Programs

- EM PA
- Pharmacy Practice
- Dietetic Internship
- Neuropsychology Fellowship
- Grad Nursing Anesthesia Program

■ Army

- General Surgery PA
- Orthopedic PA
- Primary Care Optometry
- Occupational Therapy
- Ortho Physical Therapy
- Clinical Pastoral Education
- Clinical Social Work
- Clinical Psychology Intern
- Clinical Psychology Resident
- Clinical Health Psychology Fellowship
- Trauma, Risk and Resilience Fellowship



Center for Advanced Molecular Detection



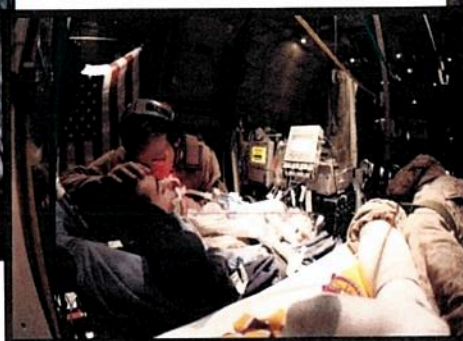
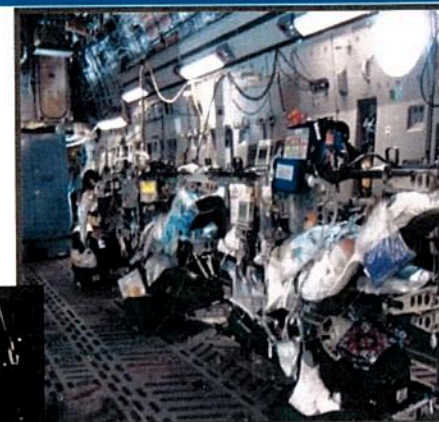
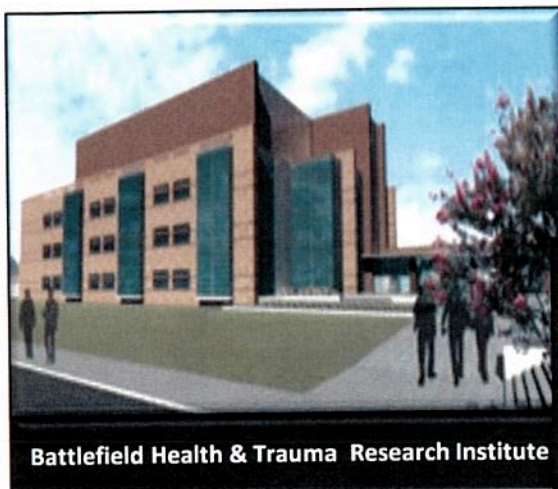
The CAMD conducts biomedical research to address critical capability gaps:

- **Respiratory Pathogen Rapid Detection and Analysis Research**
 - New and re-emerging pathogens; prevalence and persistence
 - Trainee (~90,000 in San Antonio/yr), Warfighter, Beneficiary
- **Precision Medicine**
 - Discerning causal relationships between genetic variations and diseases of military relevance





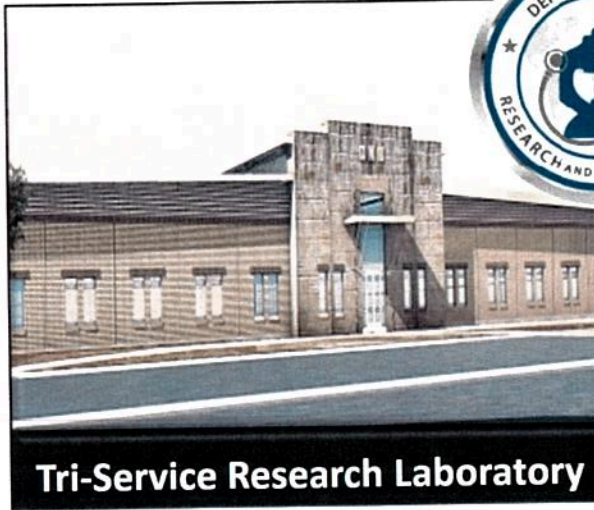
En Route Care Research Center



- The En Route Care Research Center (ECRC) co-located at the USAISR.
- Conducts translational research across the continuum of care from POI to Level 5 facilities to advance knowledge and improve treatment of injury & disease.
- A collaborative effort between the 59MDW, AFMSA, USAISR, NAMRU-SA; ERC portfolio managed in collaboration with 711HPW and JPC6.
- Initiating collaboration with WRNMMC/NMRC



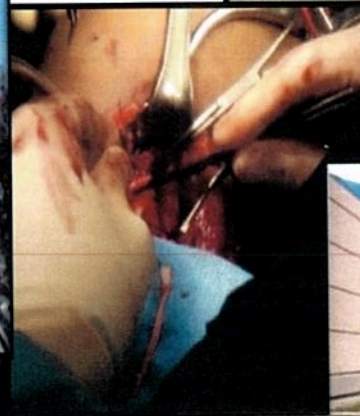
Trauma and Regenerative Medicine Research



Tri-Service Research Laboratory



Battlefield Health & Trauma Research Institute



Clinical Research Division

- Trauma Clinical Care and Regenerative/Restorative Research programs innovate Techniques and Technologies, Pre-hospital and Hospital interventions for Warrior injury care and rehabilitation to advance Best Practice.
- Multiple Service, DoD, other Gov't, Coalition, Academic and Industry partners.
- Research managed in coordinated with the 711HPW, JPCs (5, 6, 8), Armed Forces Institute of Regenerative Medicine and academia.



Summary 2016



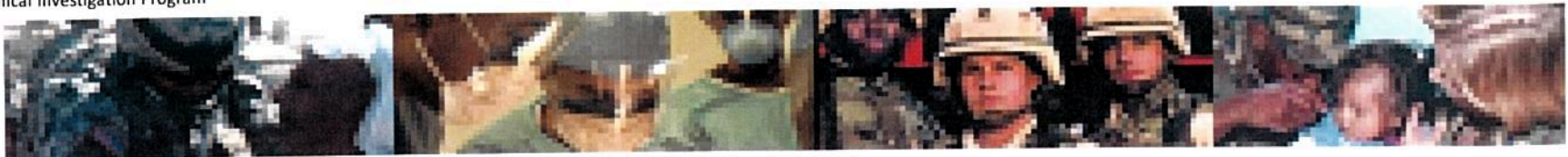
Accomplishments

- 24 Programs, 320 Pubs/Presentations, 12K Surgeries, 1.3K Medics Trained, 30 Award Winners, 80+ Sites Supported
- Technology Transition: 18 NDAs, 7 MTAs, 50 CRADAs Facilitate Gov't-Academia-Industry Partnerships (Value: ~\$15M)
- Knowledge Tools: CPG Revisions (e.g., Evaluation of Critically Ill Non-Trauma Patients Transported thru EC/CCATT)
- Material/Devices: e.g., REBOA, Vascular Injury Shunt, X-Stat, Negative Pressure Wound Therapy Sponge, Inf Dis Assays
- *Innovation: *CIP Animal Blood Donor Program; 946 Blood Units Collected, \$240K/420 Animals' Lives Saved*
- *Innovation: Fixed Research Contracting Bandwidth; Built new Vehicles/Utilize 9 Service/Federal Contract Offices*
- 2-Wing (59MDW-711HPW – AFMS Two-Research Wing Construct Collaboration):
 - Animal Model Study to Research Brain Lesions Seen in U2 Pilots & Physiological Training Techs
 - Coordinate on Program Products, e.g., R2s, Wing Research Workplan Plan Template

Initiatives In-Progress

- Enhancing Support to AF Investigators; Includes JBSA-Fort Sam Houston: 19 Projects, 8 Programs
- Leading and Supporting Wing-Wide QA/QI, EBP Initiatives to Improve Patient Care and Safety (HRO/Trusted Care)
- Submitted Nat'l Compliance Accreditation Application; Strengthen Human Research Protection Program/Patient Safety
- Received Full Accreditation for Lab Animal Care & Use Program (AAALAC); Noteworthy mention of Training Program
- Advancing Personalized Medicine Research & GHSE: 19 Projects & Regen Program; \$2M Technology Upgrades
- Wings Align AFMS Requirements with PoRs/Service Core Functions for Strategy Development; LAF Advocacy/Awareness

*CIP – Clinical Investigation Program





Science & Technology



"Grow Medical Leaders, Drive Innovations in Patient Care and Readiness"

59MDW Collaborations and Supported Sites





ST Staff Expertise



Warrior Medics – Mission Ready – Patient Focused

- MD, DVM, ScD, DrPH, DHSc, DDS
- PhD (various disciplines)
- Masters degree (MBA, MHA, MS/various disciplines)
- Wide-ranging Professional Expertise & Experiences
 - Biostatistics, Cardiology, Biochemistry, Biology, Cell Biology, Chemistry, Emergency Medicine / EMT, Epidemiology, Immunology, Internal Medicine, Laboratory Medicine, Medical Microbiology, Microbiology, Molecular Biology, Nursing Science, Neurology, Radiology, Public Health & Dental Public Health, Occupational Health, Toxicology, Vascular Technology...
 - Federal government and Military (In garrison and Deployed environments), Academia and Industry
 - Healthcare, Education, Training, Readiness and Research



Research Committees



- **59 MDW Scientific Advisory Committee (SAC):** Forges the foundation for groundbreaking clinical research endeavors that shape the future of Air Force medical care to military personnel and beneficiaries and enhances collaboration with other service, federal, academic and industry partners. Aligns priorities and state-of-the-art research at the 59 MDW which aligns with AFMS and Joint Program requirements and SAMMC / SAMHS research needs. Convenes special study committees, subcommittees, work groups: HRPP Steering Committee; Scientific Ethics and Data Safety Management Board Subcommittees; Animal Research & Simulations Special Study Committee; Research Data Working Group; Planning Committees.
- **SAMHS Research Consortium (SRC):** Supports clinical biomedical research IAW the SAMHS Memorandum of Agreement. Coordinates with the 59 MDW Scientific Advisory Committee and scientific oversight bodies of collaborating organizations (e.g., USAISR Scientific Review Board, VA Scientific Review Groups). The SRC shares information, fosters collaboration with and alignment of efforts with service, federal, academic and industry partners, and encourages Joint research activities internal to the Multiservice Market. (updated charter in staffing)